	Application No.	Applicant(s)
Interview Summary	10/815,288	NEFIAN ET AL.
	Examiner	**Art Unit**	
	Chuck O. Kendall	2192	

All participants (applicant, applicant's representative, PTO personnel):

(1) _Chuck O. Kendall_.   (3)_____.

(2) _Steven Laut_.   (4)_____.

Date of Interview: _06 July 2007_.

Type: a)☒ Telephonic   b)☐ Video Conference
        c)☐ Personal [copy given to: 1)☐ applicant   2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes   e)☐ No.
    If Yes, brief description: _____.

Claim(s) discussed: _1,7,15 and 21_.

Identification of prior art discussed: _____.

Agreement with respect to the claims f)☒ was reached.   g)☐ was not reached.   h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: _Called Attorney regarding 101 issues and attorney agreed to make corrections to claims with regards to transmission signals in claim language_.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an
Attachment to a signed Office action.   _____
                                                               Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)
In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

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Date: July 6, 2007

From: Steven Laut, Reg. No. 47,736

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Subject
PROPOSED CLAIM AMENDMENTS
Remarks

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Proposed Claim Amendments

Note that it is well known in the art that histogram bins are collections of data separated into columns of data. For example, a graphical representation of a number of branch address vectors at different times of excution.

Claim 1 (Currently Amended)   A method of determining where compiler optimization can be implemented comprising:

selecting a phase threshold value,

receiving a plurality of branch trace buffers in sequence, the plurality of branch trace buffers including a plurality of branch addresses,

determining a plurality of branch address vectors from the plurality of branch addresses,

determining histogram bins from-for the plurality of branch address vectors,

determining a distance between centers of at least two consecutive histogram bins,

comparing the distance with said selected threshold value,

determining major execution phases of an executable process based on the comparison, and

using the determined major execution phases for determining where compiler optimization is needed to improve performance in a managed run-time environment.

Claim 2 (Previously Presented)   The method of claim 1, said plurality of trace buffers comprising samples containing addresses of a plurality of branches taken at a sampling time.

Claim 3 (Canceled)

Claim 4 (Previously Presented)   The method of claim 1, where a result of said determining major execution phases is used for dynamically compiling executable code to optimize said executable code.

Claims 5-6 (Canceled)

Claim 7 (Currently Amended)   An apparatus comprising a machine-readable medium containing instructions which, when executed cause a machine to:
    select a phase threshold value,
    receive a plurality of branch trace buffers in sequence, the plurality of branch trace buffers including a plurality of branch addresses,
    determine a plurality of branch address vectors from the plurality of branch addresses,
    determine histogram bins ~~from~~ for the plurality of branch address vectors,
    determine a distance between centers of at least two consecutive histogram bins, where said at least two histogram bins are non-overlapping,
    compare the distance with said selected threshold value,
    determine major execution phases of an executable process based on a result of the compare, and
    use the determined major execution phases for determining where compiler optimization is needed to improve performance in a managed run-time environment.

Claim 8 (Canceled)

Claim 9 (Previously Presented)   The apparatus of claim 8, wherein said determine major execution phases is dynamic at a predetermined periodic rate.

Claim 10 (Previously Presented)   The apparatus of claim 8, wherein said determine major execution phases is manually commenced.

Claim 11 (Previously Presented)   The apparatus of claim 7, said plurality of branch trace buffers in sequence comprising samples containing addresses of a plurality of branches taken at a sampling time.

Claim 12 (Previously Presented)   The apparatus of claim 7, where a result of said determine major execution phases instruction is used for dynamically compiling executable code to optimize said executable code.

Claims 13-14 (Canceled)

Claim 15 (Currently Amended)   A system comprising:
        a processor coupled to one of a main memory and a cache memory,
        at least one process to communicate with said memory, and
        a phase detector that operates to determine major execution phases of said
at least one process and to comparing a distance between centers of at least two consecutive histogram bins for a plurality of branch address vectors determined from a plurality of branch addresses with a threshold value to determine where compiler optimization is needed to improve performance of the at least one process in a managed run-time environment.

Claim 16 (Canceled)

Claim 17 (Canceled)

Claim 18 (Currently Amended)   The system of claim 17, said phase detector having logic to:

determine a-the plurality of consecutive branch addresses representing a branch trace buffer,

determine a stable phase histogram for a plurality of consecutive branch addresses, and

determine a plurality of equally spaced and non-overlapping histogram bins for all possible branch addresses.

Claim 19 (Original)   The system of claim 15, wherein said phase detector having logic to determine major execution phases dynamically at a predetermined periodic rate.

Claim 20 (Original)   The system of claim 17, said plurality of sequenced buffers comprising samples containing addresses of a plurality of branches taken at a sampling time.

Claim 21 (Currently Amended)   A system comprising:

a first device having a first processor coupled to a first memory and at least one process to communicate with said first memory, and

a second device having a second processor coupled to a second memory and at least another process to communicate with said second memory,

wherein a phase detector process operating in one of said first processor and said second processor operates to compare a distance between centers of at least two consecutive histogram bins for a plurality of branch address vectors determined from a plurality of branch addresses with a threshold value to determine major execution phases of one of said one process and said another process within one of said first device and said second device for determining where compiler optimization is needed for one of said one process and said another process to improve performance in a managed run-time environment.

Claim 22 (Canceled)

Claim 23 (Currently Amended)   The system of claim 21, said phase detector having logic to:

receive a plurality of trace buffers in sequence, the plurality of trace
buffers including a plurality of branch addresses,

determine a-the plurality of branch address vectors,

determine the histogram bins from-for the plurality of branch
address vectors,

determine a-the distance between centers of the at least two consecutive
histogram bins, where said at least two histogram bins are non-overlapping, and

compare the distance with a-the predetermined threshold value.

Claim 24 (Currently Amended)   The system of claim 23, said phase detector
having logic to:

determine a plurality of consecutive branch addresses representing a branch trace
buffer,

determine a stable phase histogram for the plurality of consecutive branch
addresses, and

determine a plurality of equally spaced and non-overlapping histogram bins for all
possible branch addresses.

Claim 25 (Original)   The system of claim 21, wherein said phase detector having
logic to determine major execution phases dynamically at a predetermined periodic rate.

Claim 26 (Original)   The system of claim 23, said plurality of sequenced buffers
comprising samples containing addresses of a plurality of branches taken at a sampling
time.